



# Science Student Questionnaire

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**2018  
Grade 12  
(Pilot)**

**Pilot**

These items are being pilot tested in 2018 for possible inclusion in the 2019 NAEP operational assessment. Some items that are pilot tested may not be included in the final assessment. A pilot is a pretest that occurs prior to an assessment. Individual students will receive a subset of these 2018 pilot questions.

1. In this school year, how often have you understood what the teacher talks about in science class?
- Ⓐ Never or hardly ever
  - Ⓑ Once in a while
  - Ⓒ Sometimes
  - Ⓓ Often
  - Ⓔ Always or almost always

2. In this school year, how often have you done well on your science tests?
- Ⓐ Never or hardly ever
  - Ⓑ Once in a while
  - Ⓒ Sometimes
  - Ⓓ Often
  - Ⓔ Always or almost always

3. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)?
- Ⓐ Never or hardly ever
  - Ⓑ Once in a while
  - Ⓒ Sometimes
  - Ⓓ Often
  - Ⓔ Always or almost always

## 2018 Pilot Science Student G12

VH639071

4. In your science class this year, how often have you done hands-on activities or projects on any of the following topics? Select **one** answer choice on each row.

	Never or hardly ever	Once in a while	Sometimes	Often	Very often	
a. Living things (for example, plants, animals, or bacteria)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639072
b. Electricity (for example, circuits, batteries, or light bulbs)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639074
c. Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639073
d. Rocks or minerals (for example, diamond, iron, or lava rock)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639077
e. Technology and engineering (for example, robots, pulley systems, or ramps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639076

Pilot

## 2018 Pilot Science Student G12

VH639311

5. In your science class this year, how often have you done each of the following activities? Select **one** answer choice on each row.

	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a. Read from a science textbook (print or digital)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639313
b. Read a book or magazine (print or digital) about science topics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639315
c. Used the Internet to learn about science topics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639314
d. Watched a short video clip, movie, or video about science topics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639312
e. Used a magnifying glass or microscope for looking at small things	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639075
f. Used a thermometer or weighing scale for making measurements	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639078

## 2018 Pilot Science Student G12

VH241146

6. Which courses have you taken from eighth grade to the present? If you have taken a course more than once, give the most recent year you took it. Select **one** answer choice on each row. INCLUDE courses taken in summer school, but DO NOT INCLUDE topics that were only taught as part of a longer course.

	I did not take this course.	I took this course in Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.	I am taking or have taken this course in Grade 12.	
a. General science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241150
b. First-year biology	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241151
c. Second-year biology	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241159
d. Life science (other than biology)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241148
e. First-year chemistry	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241154
f. Second-year chemistry	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241155
g. First-year physics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241156
h. Second-year physics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241157
i. Physical science (other than chemistry or physics)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241149
j. Earth and space science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241147
k. Engineering and technology	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241158
l. Other science course (Please specify): _____	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241153

VH240111

7. Are you currently enrolled in or have you taken any online science courses for high school or college credit?

- Ⓐ Yes  
Ⓑ No

8. Are you currently enrolled in or have you taken an Advanced Placement<sup>®</sup> course in science? Select **all** that apply.
- Ⓐ Yes, I am enrolled in or have taken Advanced Placement Biology.
  - Ⓑ Yes, I am enrolled in or have taken Advanced Placement Environmental Science.
  - Ⓒ Yes, I am enrolled in or have taken Advanced Placement Chemistry.
  - Ⓓ Yes, I am enrolled in or have taken Advanced Placement Physics C.
  - Ⓔ Yes, I am enrolled in or have taken Advanced Placement Physics 1.
  - Ⓕ Yes, I am enrolled in or have taken Advanced Placement Physics 2.
  - Ⓖ Yes, I am enrolled in or have taken Advanced Placement Computer Science A.
  - Ⓗ Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles.
  - Ⓘ No, I have never taken an Advanced Placement science course.

9. Are you currently taking a science course?
- Ⓐ Yes
  - Ⓑ No

PILOT

10. Thinking about science, do you think that you would be able to do each of the following activities? Select **one** answer choice on each row.

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Describe different ways to heat or cool water	(A)	(B)	(C)	(D)	(E)	VH638868
b. Describe how the length of a vibrating string affects the sound it makes	(A)	(B)	(C)	(D)	(E)	VH638870
c. Design an experiment to show how sunlight affects the growth of a plant	(A)	(B)	(C)	(D)	(E)	VH638872
d. Use examples to show how one living thing has helped another to survive	(A)	(B)	(C)	(D)	(E)	VH638875
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	(A)	(B)	(C)	(D)	(E)	VH638876
f. Decide which tool to use if you want to measure wind speed	(A)	(B)	(C)	(D)	(E)	VH638883
g. Describe why the weather in the summer is different than in the winter	(A)	(B)	(C)	(D)	(E)	VH638885
h. Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	(A)	(B)	(C)	(D)	(E)	VH638877
i. Create a diagram that shows how bees and plants need each other for survival	(A)	(B)	(C)	(D)	(E)	VH638878
j. Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	(A)	(B)	(C)	(D)	(E)	VH638879

## 2018 Pilot Science Student G12

VH639079

11. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want other students to think I am good at science.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639080
b. I want to show others that science schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639082
c. I want to look smart in comparison to the other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639084
d. I want to get better science grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH732329
e. I want to learn as much as possible in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639086
f. I want to become better in science this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639087
g. I want to understand as much as I can in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639089
h. I want to master a lot of new science skills in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH732330

2018 Pilot Science Student G12

VH638951

12. In this school year, how often have you done each of the following activities **outside of school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	(A)	(B)	(C)	(D)	(E)	VH638970
b. Write or blog about science topics	(A)	(B)	(C)	(D)	(E)	VH638983
c. Use scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	(A)	(B)	(C)	(D)	(E)	VH638985
d. Read about science topics in books or magazines (print or digital)	(A)	(B)	(C)	(D)	(E)	VH638987
e. Attend clubs or programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)	(A)	(B)	(C)	(D)	(E)	VH638991

## 2018 Pilot Science Student G12

VH639115

13. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy science activities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639117
b. I look forward to my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639120
c. I am interested in the things I learn in science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639122
d. I think making an effort in science class is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639125
e. I think science will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639127
f. I think it is important to do well on science assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639128

2018 Pilot Science Student G12

VH639733

14. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row.

	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a. Came up with research questions to explore how something works	(A)	(B)	(C)	(D)	(E)	VH639744
b. Made drawings that explain why or how something happens	(A)	(B)	(C)	(D)	(E)	VH639749
c. Came up with experiments that you could use to answer a research question	(A)	(B)	(C)	(D)	(E)	VH639753
d. Used tables or graphs to identify relationships between variables	(A)	(B)	(C)	(D)	(E)	VH639760
e. Used math equations to explain or support scientific conclusions	(A)	(B)	(C)	(D)	(E)	VH639763
f. Used evidence from experiments to explain why something happens	(A)	(B)	(C)	(D)	(E)	VH639765
g. Used information to disagree with someone about a scientific idea	(A)	(B)	(C)	(D)	(E)	VH639770
h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	(A)	(B)	(C)	(D)	(E)	VH639777

15. How likely are you to pursue a career in science?

- Ⓐ Not at all likely
- Ⓑ Not likely
- Ⓒ Somewhat likely
- Ⓓ Quite likely
- Ⓔ Extremely likely

16. In this school year, have you done any of the following activities to prepare for a career in science? Select **one** answer choice on each row.

	Yes	No	
a. Attended a career fair	Ⓐ	Ⓑ	VH640739
b. Answered questions on a career interest survey (for example, the Vocational-Interest Inventory, the Career Interest Test, or the Strong Interest Inventory®)	Ⓐ	Ⓑ	VH640746
c. Taken a science course in addition to what you need to graduate	Ⓐ	Ⓑ	VH640748
d. Collected information about science-related careers on your own	Ⓐ	Ⓑ	VH640749
e. Collected information about science-related college programs on your own	Ⓐ	Ⓑ	VH640750
f. Spoken with a guidance counselor or teacher about science-related careers	Ⓐ	Ⓑ	VH640754
g. Spoken with a guidance counselor or teacher about science-related college programs	Ⓐ	Ⓑ	VH640757
h. Spoken with a family member or family friend who works in a scientific field about his or her job	Ⓐ	Ⓑ	VH640758
i. Shadowed a person who does science-related work at his or her job	Ⓐ	Ⓑ	VH640771
j. Worked as an intern or employee doing science-related work	Ⓐ	Ⓑ	VH640773
k. Other (Please specify): _____	Ⓐ	Ⓑ	VH640776

17. How often do you talk about things you have learned in science class with someone in your family?
- Ⓐ Never or hardly ever
  - Ⓑ Once in a while
  - Ⓒ Sometimes
  - Ⓓ Often
  - Ⓔ Very often

Pilot